

1995 5x
12

THE VIRGINIA INDIANS IN THE SEVENTEENTH CENTURY

BY

CHARLES C. WILLOUGHBY

Reprinted from the AMERICAN ANTHROPOLOGIST (N. S.), Vol. 9, No. 1,
January-March, 1907

Lancaster, Pa., U. S. A.
The New Era Printing Company
1907

THE VIRGINIA INDIANS IN THE SEVENTEENTH CENTURY

By CHARLES C. WILLOUGHBY

That branch of the Algonquian family commonly known as the Virginia Indians occupied practically all of the tidewater region of Virginia and northeastern North Carolina as far south as Neuse river. They were hemmed in on the south and west by tribes of Iroquoian and Siouan stocks, and were separated on the north from the Canai, or Conoy, and Nanticoke, kindred of the Lenape, and from the Susquehannocks, an Iroquoian people, by Potomac river and Chesapeake bay. A small portion of the peninsula between this bay and the Atlantic south of Nanticoke was, however, occupied by Virginian tribes. The lands belonging to this people were divided into many communities or petty provinces, each governed by its local chief or *weroance*, who was usually subject to a higher chieftain or great weroance. Hariot,¹ referring to the southern portion of this region, says that a weroance or chief lord had under him one to six or eight or more villages, and that the greatest chief with whom he had dealings had but eighteen towns in his dominion. In the north Powhatan had acquired by inheritance or conquest more than thirty provinces,² covering nearly all the tidewater region of Virginia proper. To the greater chieftains the people paid "tribute of skinnnes, beads, copper, pearle, deere, turkies, wild beasts and corne."³

The villages or communal units varied considerably in population, some having but few warriors, others two hundred or more. The bounds of each province were established and recognized, and its members were not allowed to encroach upon the lands of their neighbors.

¹ Thomas Hariot, *A Brief and True Report of the New Found Land of Virginia*, Holbein edition, p. 25.

² William Strachey, *The Historie of Travaile into Virginia Britannia*, Hakluyt Society, p. 55.

³ Capt. John Smith, *True Travels*, Richmond edition, 1819, p. 144.

VILLAGES

The villages consisted of two or three to fifty or more houses placed usually upon a hill or on rising ground overlooking a river.¹ In many places the towns were but a mile or half a mile apart. The dwellings of a community were often distributed over a considerable area, with groves and gardens interspersed, some of the larger villages occupying as much as a hundred acres.

HOUSES

The ground-plan of the ordinary dwelling formed an oblong rectangle, its length being commonly double its width.² The framework consisted of poles set in two parallel rows enclosing the floor space. Opposite poles were bent over and lashed to each other in pairs, forming a series of arches of equal height. These were joined by horizontal poles placed at intervals, and all securely lashed together "with roots, bark, or the green wood of the white oak riven into thongs."³ The ends of this arched framework were made of upright poles with horizontal bars added. Each house had commonly two doors, one at each end; these were hung with mats which could be turned up or let fall at pleasure.⁴ If the occupants were absent for any length of time they barricaded the doors with logs of wood set against the mat to keep out wild beasts.

The coverings consisted of bark or of mats made of long rushes.⁵ These rushes were probably the leaves of the flag or cat-o'-nine-tail, such as were used by many tribes for making covering mats, and were doubtless strung together on cords of bast, Indian hemp, or silk grass. Such mats were usually 3 or 4 feet wide and 8 or 10 feet in length, their ends being supplied with thin wooden strips about an inch wide, and with tying cords. Cords were also placed at intervals along the edges to assist in fastening the mat to the framework. When rolled up they occupied but little space, and were light and portable.

¹ Strachey, op. cit., p. 70.

² Hariot, op. cit., 24.

³ Robert Beverley, *History of Virginia*, second edition, 1722, p. 178.

⁴ Strachey, op. cit., p. 71.

⁵ Hariot, op. cit., p. 24.

In sections where bark could be procured easily it was preferred for covering the better class of permanent habitations. Some of the houses had bark walls and mat-covered roofs. Strachey says¹ that bark was used only on the principal houses, "for so many barks which goe to the making up of a howse are long tyme of purchasing." Such houses were tight and warm, but very smoky.

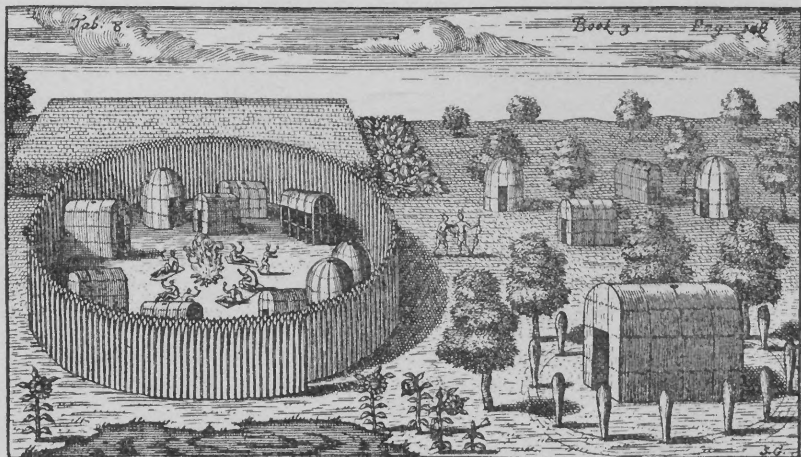


FIG. 2. — A village of the Virginia Indians, after Robert Beverley, illustrating the circular fort, two types of dwellings, a field of corn and squashes, and a temple surrounded by carved posts (*termini*). Most of the dwellings are too tall in proportion to their width. This is especially true of the round houses.

The poorer cabins were sometimes covered with boughs. There seems to be no evidence that the Virginia Indians lined the walls of their cabins with the beautifully woven and figured rush mats used for this purpose by the New England and other Algonquian tribes. It is very probable, however, that some of the mats used for bedding, to sit upon, and for general household purposes were of this kind.

The ordinary dwelling contained but one room.² The fireplace was in the center, the smoke passing out of an opening in the roof. On either side, next the wall, were platforms or bedsteads built in the usual way — short forked posts set into the ground at the four

¹ *Op. cit.*, pp. 70, 71.

² Beverley, *op. cit.*, p. 149.

corners, supporting stout poles over which shorter poles or stout reeds were laid. These in turn were covered with mats, and a mat was rolled up to serve as a pillow. Smith's description is as follows:¹

They lie on little hurdles of Reeds, covered with a Mat, borne from the ground a foote and more by a hurdle of wood. On these round about the house they lie heads and points one by the other against the fire, some covered with Mats, some with skins, and some starke naked lie on the ground, from 6 to 20 in a house.

The ordinary oblong dwelling seems to have been about 25 to 50 feet in length.² The width of the larger houses probably rarely exceeded 20 feet. The chiefs' cabins however were usually much longer.³ Powhatan had a dwelling in each of his inherited provinces which was 30 or 40 yards long.⁴ These long houses seem to have been used also for ceremonial purposes and as places for general entertainment. They were often divided into two or more rooms by mats and loose poles.⁵ The long house at Roanoke had five rooms. By the dwelling was sometimes built a scaffold of reeds or osiers which was covered with mats, forming a shelter where the men sat for recreation or pleasure, and where, on a loft of hurdles, they laid their corn and fish to dry.⁶

The temporary lodges occupied by the Indians when on their hunting expeditions were set up in two or three hours and covered with mats which the women carried with them.⁷ These lodges were probably hemispherical in form, with a circular ground-plan and of the same type as the round house of the northern and eastern Algonquians. The round houses are not shown in White's drawings, but they appear, somewhat distorted (their height being proportionally too great), in the accompanying illustration (fig. 2) from Beverley, who says they are shaped like a beehive.

The sweat-house, like that of New England, was an "oven" in some bank near the water's side. Three or four stones were placed

¹ Smith, op. cit., p. 131.

² Hariot, op. cit., p. 24.

³ Henry Spelman, *Relation of Virginia*, p. 13.

⁴ Smith, op. cit., p. 142.

⁵ Ibid., p. 163. Beverley, op. cit., p. 149.

⁶ Strachey, op. cit., p. 71.

⁷ Ibid., p. 76.

in its center and covered with the inner bark of the oak which had been bruised in a mortar. This bark acted as a sponge, retaining a portion of the water poured over it until dispelled in steam. Upon leaving the sweat-house the men plunged themselves over head and ears in cold water.¹ Sometimes a small framework was constructed and covered with mats, the interior being heated with live coals having an earthen pot inverted over them.²

TEMPLES

In every chief's territory there was a temple and a priest, two, three, or more.³ The temple, known also as the priest's house, was 18 or 20 feet wide and 30 to 100 feet long,⁴ its shape being usually like that of an ordinary dwelling. Hariot says it was sometimes covered with skin mats. There was commonly but one door, and that opened to the east. The western end of the temple was reserved for a sort of chancel separated from the main body of the building.⁵ In the smaller temples this inner sanctuary was about 10 feet deep and was partitioned from the main room by mats. Within this chancel, raised upon pillars and containing the prepared bodies of defunct chieftains, stood a small, mat-covered charnel house similar in form to a dwelling. Within the temple and sometimes within the chancel stood wooden posts or stelæ with their upper portions carved into the form of human heads and painted black, "with their faces looking down the church." These were the effigies of their dead chiefs.⁶ Sometimes a circle of these carved posts surrounded the temple, as illustrated at the right in figure 2. They were also set up around other celebrated places.

Within the chancel, near the remains of the chiefs, was the image of their god, or *Okee*, fashioned in the form of a man, "all black dressed with chaynes of perle." Sometimes the *Okee* was placed under the dead chiefs in a vault low in the ground and veiled with a mat. In some temples there were two or three of

¹ Beverley, op. cit., pp. 188, 189.

² Smith, op. cit., p. 137.

³ Ibid., p. 138.

⁴ Ibid.; Strachey, op. cit., p. 82; Beverley, op. cit., p. 166.

⁵ Strachey, op. cit., p. 82.

⁶ Ibid., p. 89; Smith, op. cit., p. 138.

these gods.¹ An Okee was occasionally kept in one of the rooms of a longhouse. It was also carried by war parties. This effigy was sometimes constructed as follows: A board three and a half feet long with a fork at the upper end for the reception of the head served as the foundation for the body. Strips of wood bent into half-circles were fastened to the front of the board to give shape to the chest and lower portion of the trunk. At the lower end of the body-piece another board was fastened which projected upon either side about fourteen inches as a foundation for the thighs.² The modeling was completed with moss and dressed skins, and the whole, carefully painted, was appropriately dressed, and ornamented with bracelets and necklaces of beads and copper. The Okee seen by Hariot at Secoton was about four feet in height and carved of wood. The face was flesh color, the breast white, and the remaining portions black with the exception of the thighs which were spotted with white.

The temple was in charge of one or more priests who maintained a perpetual fire on a hearth near the eastern end. The bodies of the dead chiefs were prepared as follows: They were first disemboweled, then the skin was laid back and the flesh cut from the bones. Strachey says this was dried over the fire into ashes and preserved in little pots. Hariot tells us it was dried in the sun and preserved in mats which were placed at the feet. The skeleton, still fastened together by ligaments, was enclosed again in its skin and stuffed with white sand³ or with "pearle, copper, beads and such trash sowed in a skynne."⁴ Upon it were placed bracelets, copper, ornaments, and strings of pearls and beads. Thus prepared, the remains were wrapped in white dressed skins and lastly rolled in mats and laid "orderly one by one as they dye in their turnes." The riches accumulated during life, such as beads, pearls, and copper, together with his tobacco pipe, and any object especially valued during life, were placed in baskets and deposited at the feet. The common people were buried in the ground in a grave about three feet deep.

¹ Hariot, *op. cit.*, p. 26.

² Beverley, *op. cit.*, p. 167.

³ *Ibid.*, p. 186.

⁴ Strachey, *op. cit.*, p. 89.

The principal temple of Powhatan was at Uttamussack and was usually in charge of seven priests. Smith says, at that locality "upon the top of certaine red sandy hils in the woods, there are three great houses filled with images of their Kings, and Devils, and Tombes of their Predecessors. . . . This place they count so holy as that but Priests and Kings dare come into them; nor the Salvages dare not goe up the river in boats by it, but they solemnly cast some peece of copper, white beads or Pocones into the river, for feare their Okee should be offended and revenged of them."

In a thicket of wood near Orapaks, Powhatan had a treasure house 50 or 60 yards in length, and frequented only by priests, where he kept his treasure, such as skins, beads, pearls, and copper, which he stored up against the time of his death and burial. Here also was his store of red paint for ointment, bows and arrows, shields and clubs. At the corners of the house stood four images as sentinels, one of a dragon, another of a bear, the third like a leopard, and the fourth like a giant-like man all made "evill favouredly according to their best workmanship."¹

It is very apparent that the idea of the temple with its two apartments, its sacred fire, and carved posts (termini) was adopted from the southern Indians. The fact that the hair of the Okee was dressed as among Florida Indians may also be significant.

FORTS

The forts of the Virginia Indians were similar to those of other Atlantic coast Algonquians. Both the circular and the rectangular² forms seem to have been in use. The former type is well illustrated in figure 2, after Beverley. The stockade consisted of substantial puncheons (split tree trunk) or stout poles ten or twelve feet high above the ground,³ placed close together with their lower ends buried three feet deep in the earth. Beverley says the stockade sometimes enclosed a whole town, though usually it encompassed only the chief's houses and as many others as they judged sufficient to harbor all the people when attacked by an enemy. Occasionally

¹ Smith, op. cit., p. 143.

² William Byrd, *The Dividing Line*, edited by J. S. Bassett, p. 95.

³ Ibid. Beverley, op. cit., p. 149.

as an additional precaution the stockade was trebled. The fort at Powhatan was "prettily fortified with poles and barks of trees."¹ This shows that the palisades were sometimes covered, partially at least, with bark as an additional protection.



FIG. 3.—An aged Virginia Indian in his winter garment. From the original drawing, in the British Museum, by John White, of the Roanoke Colony, 1585–88. (Courtesy of the Century Company.)

Smith, op. cit., p. 238.

HAIR-DRESSING

The hair of the Virginia Indians was usually dressed according to the station of the individual. Most of the men wore a ridge of short upright hair extending from the forehead across the crown to the nape of the neck like a cock's comb, the arrangement of the rest of it being governed by the rank of the wearer. The chief men of Roanoke and probably also of other sections did not shave their

heads. They wore the usual crest, however, that which remained being of natural length. This was bound into a knot at the nape of the neck (fig. 3), or was divided and made into two knots, one behind each ear.¹

The priests commonly wore the usual crest, but all other portions of the head were closely shaven with the exception of a narrow visor-like ridge above the forehead (fig. 5). They sometimes wore beards.

The following seems to have been the common method among the men generally: The hair on the right side below the crest was shaved close to prevent it "flapping about their bow string when they draw it to shoot,"² while that on the left side was allowed to attain its full length. This was sometimes tied into an "artificial and well laboured knot," stuck with many gewgaws. Sometimes an ornament of deer hair colored red was worn about the knot.³ The women were the barbers, and with "two shells, will grate away the haire into any fashion they please." Considerable care was exercised in dressing the hair, and it was frequently anointed with walnut oil. The beard was usually removed as it appeared with mussel shells used as pincers.

The hair of the maids was cut in two ridges above the forehead, the rest being trussed up in a knot behind,⁴ or the front and sides of the head were shaven close, the long back hair being prettily wound or "embroidered in plaits" which hung down the back at full length.⁵ Married women wore it all of a length, cut off square below the ears, or wore it full length either hanging at the back or brought before in a simple lock and bound with a fillet of beads, or bound in a knot at the back of the head (fig. 4).

TATTOOING

Tattooing was practised by both sexes, but it seems to have been more general among the women, who had their faces, breasts,

¹ Hariot, op. cit., pp. iii, vii.

² Spelman, op. cit., p. 18.

³ G. Percy, *A Discourse of the Plantation of the Southerne Colony in Virginia*, English Scholar's Library, E. Arber, vol. 16, p. lxxv.

⁴ Hariot, op. cit., p. vi.

⁵ Strachey, op. cit., p. 112.

shoulders, arms, and thighs "cunningly ymbrodered with divers workes¹ . . . as beasts, serpents, artificially wrought into their flesh with blacke spots."² Some of the women in Hariot's illustrations have a broad band of a conventional pattern encircling their arms and legs, a narrow band around the wrist, and also a necklace-like pattern around the neck. In White's drawing (fig. 4) tattooing is shown upon the arms and legs only.

Hariot says the chief men of Roanoke did not tattoo or paint. The men generally had a totemic mark (cicatrix) raised upon the back of the shoulder or some other part of the body, large enough to be easily distinguished at a considerable distance.

BODY PAINTING

It was the usual custom for both sexes to paint or anoint themselves with an unguent made of bear grease or walnut oil mixed with pigment. This painting, while ornamental, served also as a protection against mosquitoes and other vermin. It was also supposed to protect the person from extremes of heat and cold.

The head and shoulders of both sexes, but more commonly of the women, were painted red, and sometimes the heads of the latter were decked with white down of birds.³ Some of the men painted their bodies black and others yellow, "and being oyled over, they will stike therein the soft downe of sundry couloured birdes of blew birds, white herne shewes, and the feathers of the carnation birde . . . as if so many variety of laces were stitched to their skinns, which make a wondrous shew."⁴ In time of war they painted or crossed their forehead, cheeks, and the right side of their head in various ways. The bodies of the priests were sometimes painted half black, half red. Their faces were painted "as ugly as they can devise," the eyes often being white and their cheeks having mustache-like streaks of red.⁵

Besides soot and variously colored earths generally employed for body painting the Virginia Indians made use of certain roots, the

¹ Strachey, *op. cit.*, p. 66.

² Smith, *op. cit.*, p. 130.

³ *Ibid.*, p. 162.

⁴ Strachey, *op. cit.*, p. 66.

⁵ Smith, *op. cit.*, p. 161.

most common of which, known as red puccoon, is identified as bloodroot (*Sanguinaria canadensis*).¹ This root, ground to powder and mixed with oil, forms a paint closely resembling burnt sienna, hardly comparable to the "scarlet-like colour" of Smith. Red puccoon was highly valued by the natives, and was often collected as tribute or was sacrificed to the gods. Another root, called musquaspenne, was the source of a brighter red pigment used also to paint mats, shields, and similar objects.²

A desirable yellow body color was derived from the yellow puccoon, or golden seal (*Hydrastis canadensis*). Another prized pigment was procured from a mine near the headwaters of the Quyough, a small branch of the Potomac. This is described by Smith as resembling antimony. Men painted with this pigment looked like "Blackmoores dusted all over with silver."



FIG. 4.—A Virginia Indian woman. From the original drawing by John White, 1585-88. (Courtesy of the Century Company.)

¹ For a discussion of the etymology and application of the term *puccoon*, see Mr Gerard's article in the present number.—EDITOR.

² Strachey, *op. cit.*, p. 121.

CLOTHING

The children wore practically no clothing. Hariot says that girls of seven or eight years wore a very narrow breech-clout which supported a little moss in front. This dress was so scanty as to afford almost no protection, and a child thus costumed might well be termed naked. At about the age of twelve, however, the girl puts on a kind of apron of dressed skin and was "very shame-fac't to be seen bare."

The men commonly had a cord about the middle and wore a breech-clout of skin between their thighs, its ends being carried up between the body and the cord, over which they hung.¹ Sometimes the breech-clout consisted of nearly an entire skin with the head and tail attached. These being drawn over the girdle in front and behind served as ornaments. Chiefs and men of distinction often wore a sort of skirt of deer-skin finely dressed and fringed, it being similar to those worn by women. Sometimes both sexes wore deer-skin leggings, for warmth in cold weather or as a protection from brush and briars when hunting or collecting berries or material for mats.² The usual garment worn by women was a short skirt reaching from the waist to the middle of the thigh, made usually of dressed deer-skin. Both the upper and the lower edge was fringed. The garment was folded near its upper edge and the fringe turned outward (fig. 4). Similar skirts were woven of silk-grass fiber and were fringed on the under part by way of ornament.³ Byrd remarks the skill with which the wearers adjusted this garment.

In addition to the skirt, or breech-clout, which constituted the ordinary dress, both sexes wore mantles of various kinds. Those for summer wear were usually of deerskin dressed without the hair and fringed at the edges. These were often "carved and coloured with some pretty work, or the proportion of beasts, fowle, tortayses or such like imagry,"⁴ or were embroidered with shells, white beads, copper ornaments, pearls, or the teeth of animals.⁵ Mantles for

¹ Beverley, op. cit., p. 141.

² Strachey, op. cit., p. 66.

³ Byrd, op. cit., p. 224.

⁴ Strachey, op. cit., p. 65.

⁵ Smith, op. cit., p. 130. Force's *Tracts*, vol. III, no. II, p. 41. Percey, op. cit. p. lxiv.

winter wear were made of skins of various animals dressed with the hair on, and were worn usually with the fur side inward. Some of the larger mantles of the older men were worn with the hair outward, the inner side being lined with fur.

Mantles were sometimes made of rabbit skins or of the feathers of the turkey and other birds "so prettily wrought and woven of threds that nothing could be discerned but the feathers, which were exceeding warme and handsome."¹ Strachey's account of a feather cloak and the part it played in the toilet of the wife of Pipisco, a deposed chief, is interesting :

I was once early at her howse (yt being sommer tyme) when she was layed without dores under the shadowe of a broad-leaved tree, upon a pallett of osiers, spred over with four or five fyne grey matts, herself covered with a faire white drest deare skynne or two ; and when she rose, she had a mayd who fetcht her a frontall of white currall, and pendants of great but imperfect couloured and worse drilled pearles, which she put into her eares, and a chayne, with long lyncks of copper, which they call Tapoantaminais, and which came twice or thrice about her neck. . . . Likewise her mayd fetcht her a mantell which they call puttawus, which is like a side cloake, made of blew feathers so artefycially and thick sowed together, that it seemed like a deepe purple satteen, and is very smooth and sleeke ; and after she brought her water for her hands, and then a branch or twoo of frish green asshen leaves, as for a towell to dry them.²

Bunches of feathers were also used for drying the hands after washing. White dressed deer skin like that referred to above is of a milk white color and of the texture of chamois skin. But few examples are preserved in museums.

Short cloaks "made of fine hares skinnnes quilted" (twisted strips of skin joined by twined weaving) were worn by the priests³ (fig. 5). According to Eggleston these were sometimes woven of silk-grass fiber. Girdles and women's skirts also were woven of this fiber. In most instances where silk grass is referred to, the author undoubtedly had in mind Adam's needle (*Yucca filamentosa*), common in eastern Virginia and southward. Hariot writes :

There is a kind of grasse in the countrey upon the blades whereof there groweth very good silke in form of a thin glittering skin to bee stript of. It

¹ Stachey, op. cit., p. 65.

² Ibid., pp. 57, 58.

³ Hariot, op. cit., p. v.

groweth two foote and a halfe high or better : the blades are about two foot in ength, and half inch broad.

The colonists cultivated this plant and direction was given "for the planting of silk grass naturally growing in those parts which is approved to make the best cordage and linen in the world. Every household is bound to set 100 plants and the governor himself has set 5000."¹ Byrd may have referred to a different plant, possibly the silk weed (*Asclepias cornuti*) or the Indian hemp (*Apocynum cannabinum*) the fibers of which were extensively used by Indians in general for cordage and textile fabrics. He refers to "silk grass about as large as my little finger. The Indians use it in all their little manufactures."²

Mantles were of two types, the first being poncho-shaped. This had openings for the head and the right arm. The second, which was blanket-shaped, was thrown over the left shoulder and brought usually under the right arm, and sometimes was secured with a girdle.

Moccasins were occasionally worn. These were made usually of a single piece of buckskin drawn together like a purse on the top of the foot, and gathered around the ankle and tied with running strings. Sometimes an extra piece was put on the bottom to thicken the sole.³ Smith, referring to the poorer Indians, says that some of them "have scarce to cover their nakednesse, but with grasse, the leaves of trees or such like."

ORNAMENTS

Eagle or turkey feathers were worn in the hair, and sometimes the quill was ornamented with a rattlesnake's rattle. It was also a common custom to wear upon the head the stuffed skin of a hawk or other bird, with its wings spread. As a mark of distinction the chiefs often wore a head-band of polished copper.⁴ Strachey says this was in the form of a new moon, a shape occasionally found in the mounds. A headdress of deer antlers was sometimes worn, also the dried head of an enemy. A chief gave Captain Newport a "crown of deer's hair dyed red."

¹ Force's *Tracts*, vol. IV, A Declaration of the Colonie of Virginia, 1620, p. 10.

² Byrd, op. cit., p. 224.

³ Beverley, op. cit., p. 141.

⁴ Smith, op. cit., p. 83.

It was not unusual for the women to wear a head-band or frontal of "coral" or a wreath of dyed fur, and the chief women sometimes wore copper head-bands. In Beverley's time, after the introduction of wampum by white traders, large head-rings of these beads were worn by both sexes, and the women used strings of wampum to bind up their hair.

The headdress of a chief priest sometimes consisted of a considerable cluster of the skins of snakes, weasels, "or other vermin," stuffed and tied together by their tails in such a way that the tails met at the top of the head like a tassel. Around the tassel was a circle or coronet of feathers. The stuffed skins hung down about the head, neck, and shoulders, and partly covered the face.

The ears of both sexes were pierced with great holes, the women commonly having three in each ear, in which were hung strings of bones, shell, and copper beads, copper pendants, and other ornaments. Captain Amidas met the wife of a chief who wore in her ear strings of pearl beads as large as "great pease" which hung down to her mid-



FIG. 5.—A Priest of the Virginia Indians. From the original drawing by John White, 1585-88. (Courtesy of the Century Company.)

dle.¹ The husband of this woman wore five or six copper pendants in each ear. It was a common custom for the men to wear the claw of a hawk, eagle, turkey, or bear, or even a live snake as an ear ornament.

Bracelets and neck ornaments of various kinds of beads were common. Beads of copper seem to have been most highly valued in the early colonial period. These were made of "shreds of copper, beaten thinne and bright, and wound up hollowe," and were sometimes strung alternately with pearls which were occasionally stained to render them more attractive.² Beads of polished bone or shell were strung into necklaces either alone or with perforated pearls or copper beads. Some of these chains were long enough to pass several times around the neck. Necklaces of such construction as to be easily identified were worn by messengers as a proof of good faith. Powhatan gave Sir Thomas Dale a pearl necklace and requested that any messenger sent by Dale to him should wear it as a guaranty that the message was authentic.³

Breastplates of copper were worn; also gorgets of shell, about four inches in diameter, on which were engraved stars, circles, a half moon, or other designs that suited their fancy.⁴

Pearls of various shapes and sizes were comparatively common, but symmetrical pearls of uniform size were more rare. Strachey writes of having seen "manie chaynes and bracelettts [of pearls] worne by the people, and wee have found plentie of them in the sepulchres of their kings, though discoloured by burning the oysters in the fier, and deformed by grosse boring." One of Hariot's companions obtained from the Indians about five thousand pearls, from which a sufficient number of good quality and of uniform size were obtained to make a "fayre chaine, which for their likenesse and uniformitie in roundnesse, orientnesse and pidenesse of many excellent colours, with equalitie in greatnesse, were verie fayre and rare."⁵

Those who have examined the thousands of pearls from the Ohio mounds in the Peabody Museum at Cambridge or in the Field

¹ Smith, *op. cit.*, p. 83.

² Strachey, *op. cit.*, p. 67. The "blue" or "violet colored" beads shown in White's original drawings are probably stained pearls.

³ Smith, *op. cit.*, pt. II, p. 19.

⁴ Beverley, *op. cit.*, p. 96.

⁵ Hariot, *op. cit.*, p. 11.

Museum at Chicago can readily understand these conditions. The pearl beads from the mounds vary in diameter from about an eighth of an inch to half an inch or more, the great majority being small and irregular, although there are many among them of good form and value. It is probable that most of the Virginia pearls were obtained from the freshwater mussel (*Unio*).

The most valued ornaments were made of copper. This was wrought, as above noted, into beads, pendants, breastplates, and head-bands. It is not improbable that even before Hariot's time European copper had been obtained in small quantities by the natives, but most of the copper in their possession at that period was probably of native origin. There can be no question, however, as to the native source of some of the copper found among them. Captain Newport understood from the Indians that it "was gott in bites of rocks and betweene cliffs in certayne vaynes."¹ The following statement by Hariot² undoubtedly refers to metals from the Lake Superior region :

A hundred and fiftie miles into the maine in two townes wee founde with the inhabitantes diverse small plates of copper, that had been made as wee understood, by the inhabitantes that dwell further into the country : where as they say, are mountaines and Rivers that yeeld also whyte graynes of Mettall, which is to be deemed *Silver*. For confirmation whereof at the time of our first arrivall in the country I sawe, with some others with me, two small peeces of silver grosly beaten about the weight of a Trestone³ hangyng in the eares of a *Wiroans* or *Chief Lorde* that dwelt about fourescore myles from us ; of whom throwe enquiry, by the number of dayes and the waye, I learned that it had come to his handes from the same place or neere, where I after understood the copper was made and the white graynes of mettall founde. The aforesaid copper wee also founde by triall to hold silver.⁴

Native silver ornaments are rare ; typical examples however are in the larger museums. In the Peabody Museum of Harvard University are two nuggets of pure silver weighing twelve and three-fourths pounds from a mound in Michigan. Accompanying the nuggets were two ornaments made from thin sheets of this metal, which had been hammered from native nuggets by the Indians.

¹ *Archæologia Americana*, vol. IV, p. 48.

² Hariot, op. cit., p. 10.

³ A shilling coined by Henry VIII.

⁴ Hariot, op. cit., p. 10.

Those familiar with the large breastplates and other ornaments wrought from native copper that have been obtained from the mounds of Ohio and the adjacent region will appreciate the following information gathered from Powhatan :

And for copper, the hills to the norwest have that store, as the people themselves, remembered in the first chapter, called the Bocootauwanaukes, are said to part the solid mettall frome the stone without fire, bellows or additament, and beat it into plates, the like whereof is hardly found in any other part of the world.¹

Powhatan endeavored to monopolize the trade in copper with the English in Virginia, keeping most of it himself, although he disposed of a small amount of it to neighboring tribes for "a hundred times its value." Strachey writes : "If our copper had ben well ordered in Virginia, as maye be hereafter, I am assured that lesse than one ounce will serve to entertagne the labour of a whole hows-hold for ten dayes."

There seems to have been four and perhaps five types of shell beads of native origin among the Virginia Indians. The first of these was a small univalve (*Marginella*) with the ends or side ground away to admit of stringing. These were sometimes used in decorating garments. The second type, called roanoke, was made of small rough-edged disks of shell perforated.² This in early days served also as currency. Roanoke was produced in considerable quantity, the greatest source of supply being apparently Cuscarawaoke, a village to the east of Chesapeake bay, just beyond the border of Powhatan's confederacy. The youngest daughter of Powhatan, a girl twelve years of age, was sold to a chief for two bushels of these beads.³

Another form of shell bead, two or three inches long and perforated lengthwise, was made from the columella of large univalves. These were highly valued. They also made from the columella a large bead with an outline approximately oval. These they called "runtees." This name was applied also to a discoidal bead about an inch in diameter, drilled edgewise.⁴ Purple and white wampum

¹ Strachey, op. cit., pp. 27, 132.

² Beverley, op. cit., p. 196.

³ Smith, op. cit., pt. II, p. 20.

⁴ Beverley, op. cit., p. 196.

beads, made from the shell of the quahog and introduced into Virginia by white traders, were made largely by the Dutch and Swedes of the Middle states. During the latter part of the seventeenth century these became very common, and belts, garters, bracelets, large head-rings, wallets, etc., were made of them. Beverley¹ gives the current values of wampum at nine pence a yard for the white and eighteen pence a yard for the purple. This would equal about eighteen of the white beads for a penny.

HOUSEHOLD UTENSILS

Each household had stones for cracking nuts and for grinding shell and other material.² These were undoubtedly like the pitted stones, anvils, hand-hammers, and grinding-stones common everywhere on old village sites.³ The mortars and long pestles for crushing corn were of wood⁴ and were probably of the same type as those used by other eastern tribes.

The wooden bowls and platters mentioned by Strachey were doubtless of the same type as those found among other eastern Algonquians, which were wrought from knotty portions of hard, close-grained wood by charring and scraping.

Gourds of various forms were used for the manufacture of rattles and household utensils, such as cups, ladles, and bottles. Baskets were of various sizes and kinds. They were made of silk grass, native hemp, corn-husk, the bark of trees,⁵ wicker, and probably also of splints. Basket sieves were used for sifting corn-meal. Hariot figures an Indian with a large openwork carrying-basket, apparently of wicker, and of the style of construction known as twined weaving. Beverley figures a woman making a basket which she has suspended upside down by a cord from a branch, a not uncommon way of securing baskets of the twined type during the process of weaving.

Cooking pots were common. They were made of clay tempered with crushed shell or stone, a typical form being shown in figure 6.

¹ Beverley, *op. cit.*, p. 196.

² Hariot, *op. cit.*, p. 23.

³ See, for example, the stone implements found at Pope's Creek, Maryland, described and illustrated by Mr Holmes in this number. — EDITOR.

⁴ Strachey, *op. cit.*, p. 129.

⁵ Byrd, *op. cit.*, p. 102. Spelman, *op. cit.*, p. 17.

The bottom was rounded or more or less pointed. Hariot says: "Our potters . . . can make noe better; and then remove them from place to place as easelye as we can do our brassen kettles. After they have set them upon a heape of erthe to stay them from fallinge, they putt wood under which being kyndled one of them taketh great care that the fyre burn equallye Rounde about." Fire was kindled by chafing a dry, pointed stick in a hole of a little square piece of wood.¹ The wood of the pawpaw was preferred



FIG. 6. —Cooking in an Earthen pot. From the original drawing by John White, 1585–88. (Courtesy of the Century Company.)

for this purpose.² The wigwam was lighted to some extent by the hearth fire. When additional light was desired, candles or torches about a foot long were used, made of splinters of pitch-pine or fir.³

MUSICAL INSTRUMENTS

Rattles were made of gourds in which a few pebbles were placed. They were supplied with wooden handles and were of various sizes and tones. Drums consisted of an earthen pot with a skin stretched over the aperture, the tone being regulated by partially filling the pot with water.⁴ The war drum was made by covering the mouth of a deep wooden platter or bowl with a skin, at each of the four corners of which a walnut was tied. These were twisted or manipulated with a cord in such a way as to draw the skin very tight.⁵

¹ Smith, op. cit., p. 131.

² Byrd, op. cit., p. 314.

³ Strachey, op. cit., p. 112.

⁴ Beverley, op. cit., p. 193.

⁵ Smith, op. cit., p. 136.

Smith tells us that they used a thick cane on which they piped as on a recorder. He undoubtedly refers to the native flageolet, so widely distributed among American tribes.

The Indians had numerous love songs which they sung "tunable enough."

IMPLEMENTS AND WEAPONS

Knives were made of sharpened shell or from a splinter of reed with silicious coating. These reed knives were very effective implements and were employed in such delicate work as trimming arrow feathers. With this knife they would also "Joynt a Deere or any beast, shape his shooes, buskins, mantels, &c."¹

Another useful implement, a small chisel, was made by setting the incisor of a beaver into a wooden handle. The hard outer enamel of the tooth formed a sharp cutting edge. This tool was used for notching arrows, working bone,² and for other fine work. Beaver-tooth blades are occasionally obtained from shell-heaps and village sites in the eastern states. They are usually made from the lower half of a lower incisor.

Smith says hatchets were made of a long stone, sharpened at both ends and put through a piece of wood. He probably refers to the long type of ungrooved axe or celt which was commonly hafted in this manner. Clubs, or swords as they were usually called by the Virginia writers, were carried by warriors in addition to the bow and arrow. These were shaped like a blunt-pointed, curved sword and were about three feet long; they were made of heavy wood, and sometimes were ornamented with engraved designs and paintings. Beverley found several with the remains of a dead chief in a temple. A "beard," painted red, from the breast of a wild turkey, and two of the longest feathers from his wing, were attached to the upper end of one of these weapon by a string six inches long.³ Another type of club in frequent use was made from the "horne of a Deere put through a peece of wood in form of a Pickaxe."⁴

¹ Smith, op. cit., p. 132.

² Ibid.

³ Beverley, op. cit., pp. 166, 167.

⁴ Smith, op. cit., p. 132.

Bows were usually made of maple, locust wood, or witch-hazel, and scraped into form with sharp shells, the string being of stag's gut or a thong of deer-hide twisted.¹ Like all the Atlantic coast bows they were from five to six feet in length. For shooting squirrels in trees they used an arrow with a wooden shaft tipped with a bone point two or three inches in length. The arrow in more general use had a reed shaft and a wooden foreshaft. It was usually tipped with either a stone point, the spur of a turkey, or the bill of a bird. Antler tips also were used for arrowpoints.²

The flaker for making flint points was "a little bone" (antler), worn at the bracer or wrist-guard, which commonly was made from the skin of a wolf, badger, or black fox. For attaching the points and feathers to their arrows they used shredded sinew and a glue made from the tips of deer horns boiled to a jelly.

Quivers were made either of rushes, bark, or the skin of some animal. For defense the Indians had circular shields of bark which were sometimes painted red. Strachey says these were neither common nor used in all sections.³ Harriot mentions "armours made of sticks wickered together with thread," but there seems to be no evidence that rod armor was in general use among the Virginian tribes. The Iroquois, however, used rod armor, and Champlain figures it. The party of Massawomekes (probably Iroquoian) in seven bark canoes met by Smith at the head of Chesapeake bay, were supplied with shields made in the same manner as the armor. These consisted of "small sticks woven betwixt strings of their hempe and silk grasse, as is our Cloth, but so firmly that no arrow could possibly pierce them." Smith was impressed by the superiority of workmanship evinced by the weapons and utensils carried by this party, "whose Targits, Baskets, Swords, Tobacco pipes, Platters, Bows, and everything they shewed, they much exceeded them of our parts" (Virginia).⁴

HUNTING AND FISHING

In hunting and fishing the Indians took "extreme pains." They esteemed it a pleasure and were very proud to be expert

¹ Strachey, *op. cit.*, 105.

² Smith, *op. cit.*, p. 132. Percy, *op. cit.*, p. lxxviii.

³ *Ibid.*, p. 132. Strachey, *op. cit.*, pp. 106, 121.

⁴ *Ibid.*, pp. 135, 185.

therein. Every man did his best to show his dexterity, for by exceeding in these qualities they obtained their wives. It was the custom at certain seasons for two or three hundred individuals to leave their village and join in a grand hunt up toward the mountains three or four days' journey through the wilderness.¹ The women and children accompanied the men, the women carrying the mats and household utensils. Small cabins were made by erecting frames of poles and covering them with the mats brought by the women. These cabins were furnished with the objects necessary for comfort and convenience. On such occasions it was not unusual for the men to start a circle of fire five or six miles in compass. The deer within the circle were driven toward the center by the fire and the noise made by the men, until they were surrounded and slain. The hunters frequently took from six to fifteen deer in this manner.²

Another method of taking deer in large numbers was to drive them toward some point of land and force them into the river, where they were despatched by Indians in boats.

An ingenious method of stalking was practised by the individual hunter, who used for this purpose the skin of a deer with head and legs attached. The head was stuffed and made to look as natural as possible. This skin was put on by the hunter, who imitated the motions of a deer. In this disguise it was comparatively easy to approach within shooting distance of the game.³

The Indians were naturally expert bowmen and at forty yards would shoot level or very near the mark. Their bows would carry one hundred and twenty yards at random. The boys were instructed in archery at a very early age, and it was a common practice for their mothers to refuse them food in the morning until they had succeeded in hitting a designated mark.⁴ All manner of game was sought for food and for their skins, including squirrels, rabbits and larger quadrupeds, and turkeys, grouse, and water fowl in general.

In taking fish the Indians acquired great proficiency. They

¹ Strachey, *op. cit.*, p. 75.

² Smith, *op. cit.*, p. 133; Byrd, *op. cit.*, p. 223.

³ *Ibid.*, p. 134.

⁴ Strachey, *op. cit.*, p. 110.

employed the hook and line, the noose, the dip-net and seine, weirs of various kinds, fish traps, the bow and arrow, the spear, and probably also the harpoon. Their nets and other cordage were made of bast, sinew, or the fiber of plants. The source of one of the most valued fibers was *Yucca filamentosa*.

For angling they used "long small rodde at the end whereof they have a clift to which the lyne is fastened, and at the lyne they hang a hooke."¹ "Their hookes are either a bone grated . . . in forme of a crooked pinne or fish hooke, or of the splinter of bone tyed to the clift of a little sticke, and with the end of the line they tie on the bait."² Barbless fish-hooks made wholly of bone may have been of prehistoric origin in the Atlantic coast region. A few have been found on ancient village sites and in shell-heaps, but they do not seem to have been in general use. The second type noted above was the common form, and was constructed as follows: A splinter of bone an inch and a half or two inches in length was ground to a sharp point at one end, the opposite extremity being flattened and brought to a wedge-shaped point. The shank of the hook was made from a piece of wood two or three inches long, the lower end of which was split to receive the wedge-shaped end of the bone point, which was inserted at an angle of about forty-five degrees and the two pieces bound firmly together. Champlain found this hook in use among the New England Indians and describes it with his usual accuracy. Hundreds of these bone points have been taken from the shell-heaps of the Atlantic coast. This hook survives among the Nascapsee and Montagnais north of the St Lawrence.

Sturgeon were often caught in the narrow parts of rivers by slipping a noose over the tail.³

Nets were as "formally brayed and mashed" as those of the English.⁴ Dip-nets were of the ordinary form and were used principally for taking fish entrapped in weirs. Weirs were made of reeds about as large as a man's finger, woven together with splints of white

¹ Strachey, op. cit., p. 75.

² Smith, op. cit., p. 133.

³ Beverley, op. cit., p. 131.

⁴ Strachey, op. cit., p. 75.

oak. This frame was fastened to stakes driven into the bed of the stream. Enclosures were arranged in such manner as to allow the fish to enter easily, where they were taken in dip-nets by men in boats. Sometimes they carried a hedge across a creek at high water, and when the water was low, would go into the run, then contracted into a narrow stream, and secure the fish. Where the water was shallow and the current strong, a sort of dam of loose stones was often built quite across a stream, leaving openings or tunnels at intervals. At the entrance to these tunnels were placed conical fish traps about 10 feet in length and 3 feet in diameter at the broadest end, woven of reeds.¹ Similar fish traps were used by other Algonquian tribes. Champlain found them in the St Lawrence and on the New England coast, and they are still made by some of the Georgia negroes, who evidently adopted them from the Indians. At the larger end of the trap is a funnel-shaped arrangement of flexible splints with their points projecting inward. This allows the fish to enter, but prevents their escape. The fish are removed from the trap by a door in its side.

Fish were taken with the bow and arrow, the latter being attached to a long cord. They were also taken with spears, the simplest form of which was a sharpened stick. The more carefully constructed spears were pointed with a sharpened bone, a fish spine, or the tail of a horseshoe crab.² Fish were often speared at night by the light of a fire built upon a raised hearth in the center of the dugout canoe. It was one man's work to tend the fire and keep it flaming, which served the double purpose of dazzling the eyes of the fish and of lighting the water and the bottom of the river so that the fish could be easily taken with spears by the other men in the boat.

The dugout canoe was the prevailing type in Virginia. This was made of a single log by charring, and scraping with shells and sharp stones. The larger canoes were forty or fifty feet in length and capable of carrying forty men. Usually, however, they were much smaller. Bark canoes were made principally for the tem-

¹ Beverley, *op. cit.*, pp. 130, 131.

² Harriot, *op. cit.*, p. xiii.

porary use of travelers in crossing streams and lakes.¹ These seem to have been rude affairs, much inferior in every way to those of the north.

AGRICULTURE

Each family had its garden, a plot of ground commonly one hundred to two hundred feet square,² which was carefully cultivated, being kept "as neat and cleane as we doe our gardein bedds."³ In clearing new land the trees were girdled near the ground by bruising the bark, and when sufficiently dry they were felled by the aid of fire and stone axes and the stumps burned. In preparing a field the ground was worked over by "the men with wooden instruments made almost in forme of mattockes or hoes with long handles." The weeds and corn stubble were dug up and allowed to dry, then made into many small heaps and burned. The woman's planting implement, which she used sitting, was about a foot long and five inches in breadth. (The large, leaf-shaped flint "spades" of the southern Illinois region had probably the same function.) Beginning at the corner of the field the woman with this implement made a series of holes about three feet apart, in each one of which, at intervals of about an inch, she placed four grains of corn and two beans, and covered them with earth. "And so through the whole plot . . . but with this regard that they be made in rankes, every ranke differing from other half a fadome or a yarde, and the holes also in every ranke as much, by this means there is a yard spare ground betweene every hole." Within this space, according to discretion, here and there were planted pumpkin, squash, sunflower, and other seeds.⁴ Occasionally a vegetable of one kind occupied a bed by itself, but usually the various species were grown together in one field, as above noted. The gardens were kept carefully weeded by the women and children, and when the corn was about half grown it was hilled.

Little houses or shelters raised upon platforms in the fields were occupied by watchers, whose duty it was to keep the birds from

¹ Beverley, *op. cit.*, p. 156.

² Strachey, *op. cit.*, p. 72.

³ *Ibid.*, pp. 72, 112.

⁴ Harriot, *op. cit.*, pp. 14, 15. Smith, *op. cit.*, p. 126.

injuring the crops. Corn, beans, pumpkins, squashes, tobacco, and the sunflower were raised in these gardens. To this list Hariot adds an herb called melden by the Dutch, the seeds of which were used to thicken broth, and the saline ashes of its stalk to season broths and stews. This plant is identified by Pickering as Mexican tea (*Chenopodium ambrosioides*).¹ A cache of nearly three pecks of the seeds of this plant or a closely allied species was found in a cave in Hocking county, Ohio, about thirty years ago.² According to Smith and Strachey the Indians planted also the maracock, or passion flower (*Passiflora incarnata*). "There were cart loads" of its fruit in every cultivated field. Beverley, however, says they grew spontaneously, and while the Indians often ate the fruit, they did not take the trouble to plant it.

There were four varieties of corn (*Zea mays*), two early and two late. One of the early kinds was but three or four feet high, and it bore an ear about the size of a "case nife handle." Two crops of this variety could be raised in one season. The second kind of early corn grew to a height of nine or ten feet, with an ear seven or eight inches in length. The kernels of both early varieties were plump and well filled out. The two varieties of late corn were recognized by the shape of the kernel: the first, known as flint corn, having a plump grain, the other, called "she corn," a dent or depression in the outer end of the kernel. The ears were of various colors, some being white, yellow, or red, others blue or variegated.³

Beans (*Phaseolus vulgaris*) were of several colors and sizes. The "pease" noted by early Virginia writers were a small variety of bean, perhaps the pea bean (*P. nanus*). The pumpkin (*Cucurbita maxima*) is generally supposed to have been grown by most of the agricultural tribes as far north as the St Lawrence.⁴

Squashes (*Cucurbita polymorpha*), the "asquta squash" of the New England Indians, called "macocks" by the Virginia natives, were of several varieties. They were usually cooked before ripening, when the shell and seeds were tender. Some varieties furnished

¹ Charles Pickering, *History of Plants*, p. 710.

² *Peabody Museum Reports*, vol. 11, p. 49.

³ Beverley, *op. cit.*, pp. 126, 127.

⁴ Pickering, *op. cit.*, p. 710.

the gourds from which cups, bowls, ladles, bottles, and rattles were made.

The great sunflower (*Helianthus annuus*) was cultivated for its seeds, which were used "both to make a kind of bread and broth."¹

Tobacco (*Nicotiana rustica*), called by the natives "apooke," is described by Strachey as being poor and weak in comparison with that of the West Indies. Its height was rather less than three feet, its blossom yellow, and the leaf short, thick, and rounding at its upper end. The plant was dried over a fire, or sometimes in the sun, and crumbled to powder—stalk, leaves, and all. It was usually grown in a bed by itself.

Muskmelons and watermelons, so accurately described by Beverley as cultivated by the natives, were probably introduced by Europeans. This is also true of the sweet potato, although this plant originated in tropical America.

The gardens of the principal chiefs were planted by the people, who met by appointment and with "such diligence worketh as for the most part all ye Kinges corne is set on a day." In harvesting, the corn was picked and placed in hand-baskets, then emptied into larger baskets. The ears were thoroughly dried upon mats, care being taken to protect them from the dew by covering them at night. When sufficiently dry the corn was placed in the house in piles, and shelled by "wringinge the eares in peises betwene ther hands." The shelled corn was placed in a great storage basket which "taketh upp the best part of some of ther howses."² Corn was sometimes cached.

FOOD IN GENERAL

The space allotted to this paper will permit only a brief reference to the more important foods. Smith writes that during March and April the Virginia Indians lived principally on turkeys, squirrels, and fish. In May and June they planted their fields and subsisted on fish, acorns, and walnuts; or they would disperse in small companies and collect fish, game, crabs, oysters, land tortoises, and wild fruits. In June, July, and August their food consisted mostly of fish, berries, green corn, and roots of the tuckahoe. The above

¹ Hariot, op. cit., p. 14.

² Spelman, op. cit., p. 17.

list is of course not exhaustive. In the fall the natives fared quite sumptuously on the products of their fields. After the harvest came their customary hunting expedition westward toward the mountains in search of deer and other game which had become scarce in the vicinity of the villages. During the winter months their food consisted of corn, beans, nuts and acorns, dried fruit, and berries, and what game they could secure. Fish and meat were preserved by drying upon hurdles over the fire or upon spits. Oys-

ters were strung upon strings cured in smoke¹ and packed in



FIG. 7.—Manner of serving food upon a wooden platter. Usually the men ate by themselves and were served by the women. From the original drawing by John White, 1585–88. (Courtesy of the Century Company.)

baskets. Peaches and other fruits and berries were dried upon mats and stored for future consumption. Chestnuts were eaten raw or made into meal. Walnuts were eaten after the usual manner, or were crushed between stones and the oil extracted by boiling; they were also crushed in a mortar with water and used in stews. Acorns were dried upon hurdles over the fire, then prepared by boiling. Seeds, including wild rice (*Zizania aquatica*), and roots of many kinds were collected. Among the more important roots were ground nuts (*Apios tuberosa*) and tuckahoe, which “groweth like a flagge in Marishes. In one day a Salvage will gather sufficient for

¹ Strachey, op. cit., p. 127.

a weeke."¹ The term tuckahoe seems to have been applied to roots of various species as well as to a fungus (*Pachyma cocos*) growing underground in sandy pine-barrens.²

Their main reliance for a considerable portion of the year, however, was corn. The importance of this cereal as a winter food is shown by the large amount in storage. In 1610 Captain Argoll obtained by barter from the chief Potawomack nearly four hundred bushels of corn and beans.³ Captain Smith procured from Powhatan two or three hundred bushels of corn for a pound or two of blue glass beads. At another time he "wrangled out of" this chief eighty bushels of corn for a copper kettle.

A large amount of green corn was consumed, it being commonly roasted or boiled. Their late corn, if not wholly ripe when gathered, was parched in hot ashes to preserve it. Meal was prepared by grinding dry corn in a mortar and sifting through a basket sieve, the meal being received in a wooden platter. Parched meal was often eaten dry or with the addition of a little water. Cakes were made from corn, wild rice, or sunflower seeds, ground and mixed with water, and baked in hot ashes, or boiled. Many kinds of stews and pottage were prepared that were both palatable and nutritious. Food was fairly abundant and there were but few months in a season when even the more improvident natives were not well supplied.

¹ Smith, op. cit., p. 123.

² J. H. Gore, Tuckahoe or Indian Bread, *Smithsonian Report* for 1881. See also Mr Gerard's description of this food product, *postea*.

³ Strachey, op. cit., p. 38.